



Ecological forecasting tools for animal movement management at the Yukon-to-Yellowstone migration corridor

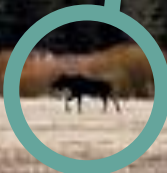
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Nilanjan Chatterjee³, Ashley Lohr⁴, John Fieberg³, Roland Kays⁴

¹The Ohio State University

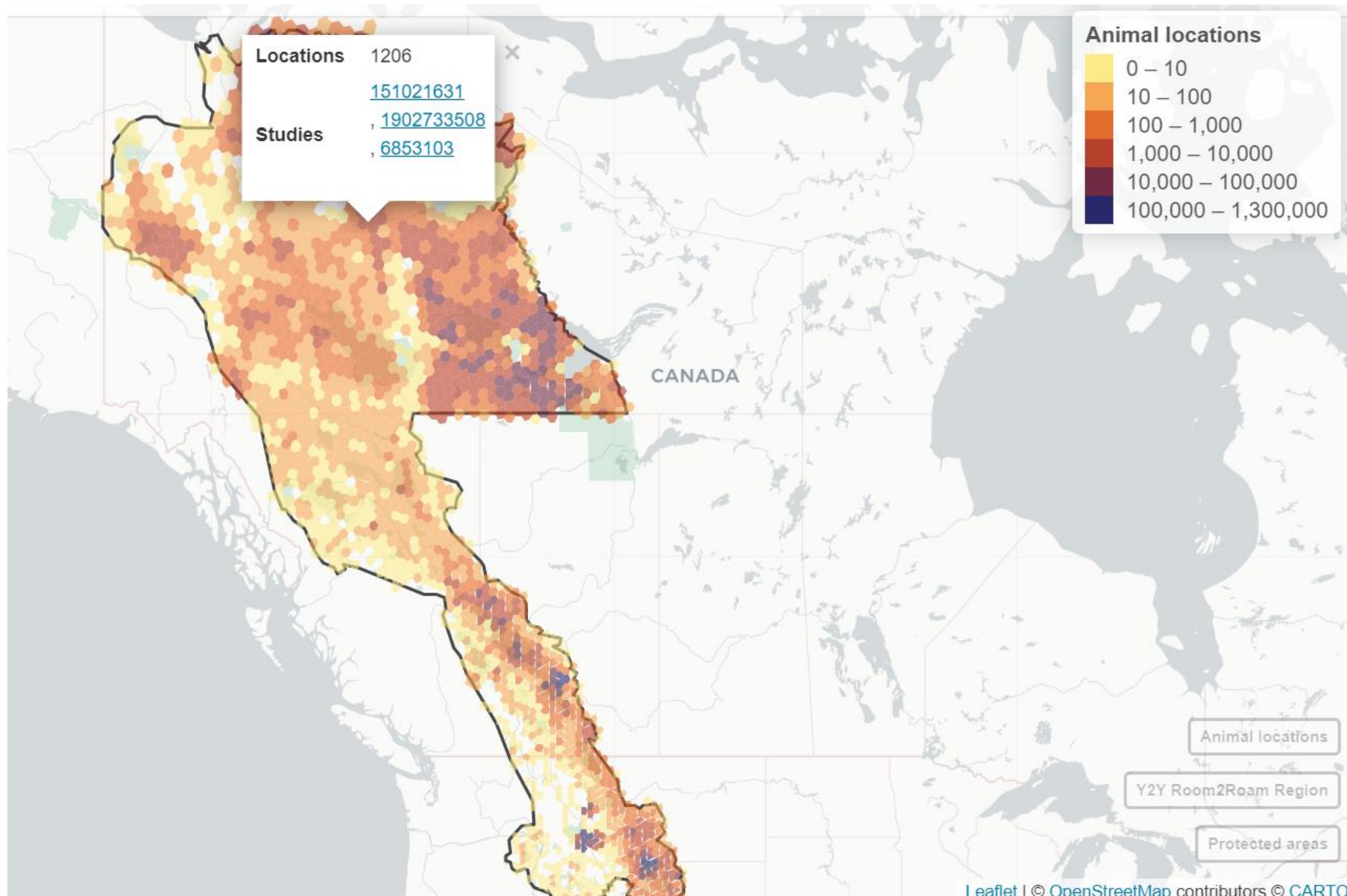
²Max Planck Institute of Animal Behavior

³University of Minnesota

⁴North Carolina Museum of Natural Sciences



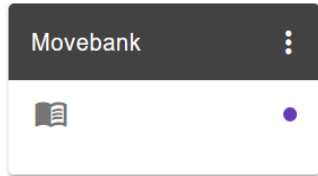
Collaboration platform – the Movebank Y2Y Archive



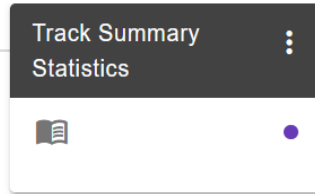
MoveApps work processes

Y2Y: Identify Road Crossings •

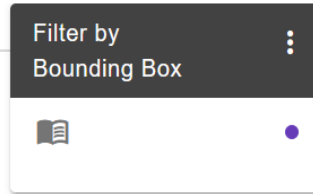
Download



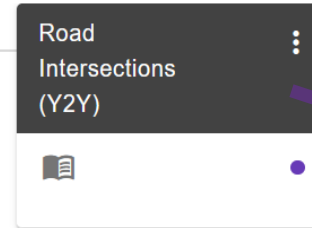
Assess



Prepare

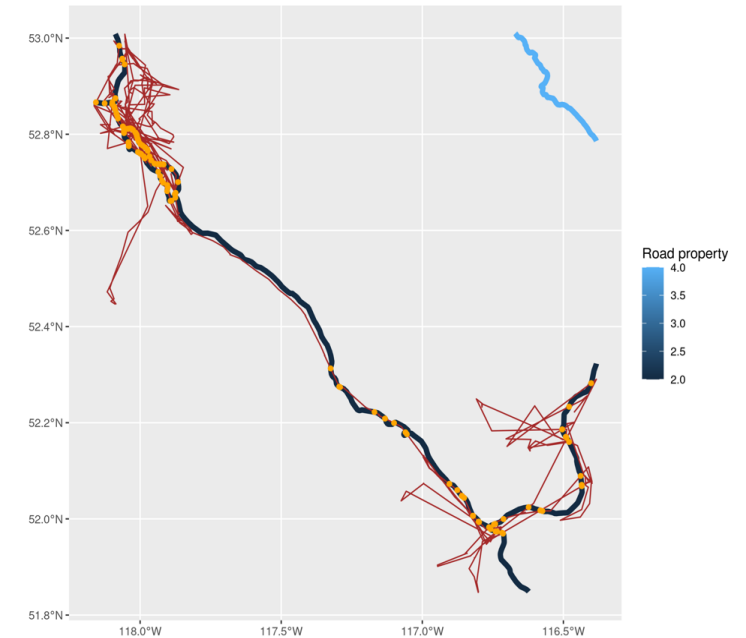


Classify



Study "Hebblewhite Alberta-BC Wolves"

Jacob W. Frank



ECODATA – Prepare

Movement Data Aggregator - Tracks Explorer App

Boundary shape: Convex hull

Buffer size: 0.1


Create boundary

Map tile: EsriUSATopo

☒ Datashade tracks

Apps

- [Gridded Data Explorer App](#)
- [Movie Maker App](#)
- [Subsetter App](#)
- [Tracks Explorer App](#)



The map displays a geographical area of the Pacific Northwest, including parts of Washington, Oregon, and Idaho. A red line represents the convex hull boundary calculated from the movement tracks. The tracks themselves are represented by a dense cluster of small dots, color-coded by density using a 'magma' color scale, with the highest concentrations appearing in bright yellow and orange. The map includes a coordinate grid with latitude (y-axis, 61 to 62) and longitude (x-axis, -118 to -114) markers. A copyright notice '© Esri, NatGeo, i-cubed' is visible in the bottom right corner of the map area.

▶ **Input Data**

Output file: C:\Users\bohrer.17\Downloads\tracks_extent.geojson

ECODATA – Animate

ECODATA-Animate

— □ ×

Load settings

Animal track data

Tracks visualization options

Environmental data

Shapefiles

Labeled points

Elevation

Select track data

File path

C:\Users\bohrrer.17\Desktop\GitHub\movebank_vis\apps\app1\animator_data\bears_with_ref.csv

Data filters:

Individuals:

▼ ☒ All individuals

☒ BLBE-21-01

☒ BLBE-21-02

☒ BLBE-21-03

☒ BLBE-21-04

☒ BLBE-21-05

☒ BLBE-21-06

☒ BLBE-22-01

Time range:

Start date 2021-09-13 ▼

End date 2022-10-11 ▼

Update filters

Geographic extent:

Min latitude 61.09

Min longitude -117.9

Max latitude 63.37

Max longitude -114

Selection summary:

Number of individuals selected:

Earliest timestamp in selection:

Latest timestamp in selection:

Number of points in selection:

Output:

☒ Generate last frame only

Set output directory

File path

C:\Users\bohrrer.17\Desktop\GitHub\movebank_vis\apps\app1\AnimatorOutput\Bears0423

Create animation

Status

Animation saved to the output directory.

01-Jan-2017

66°N

60°N

54°N

48°N

42°N

138°W

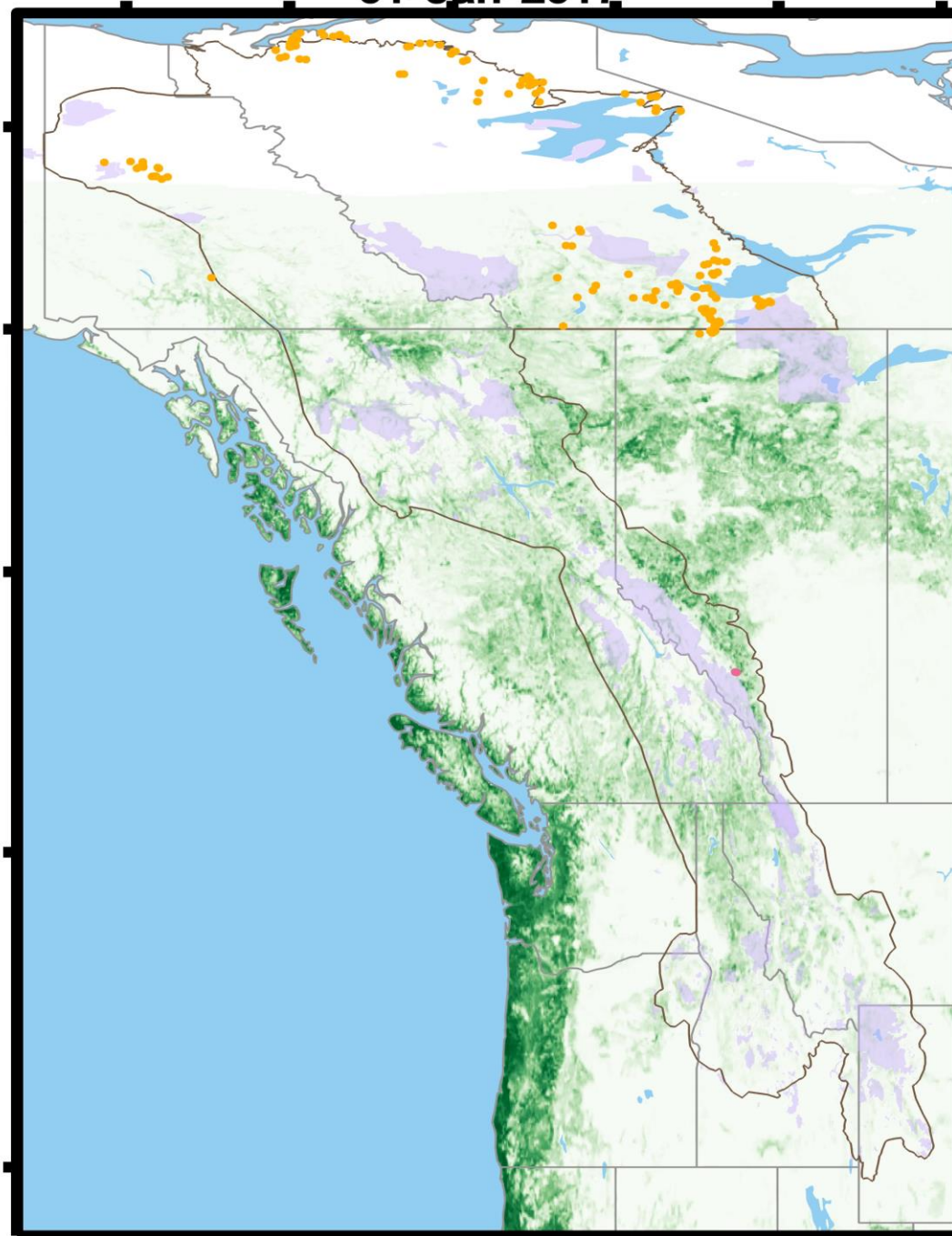
132°W

126°W

120°W

114°W

108°W



End-user driven developments and applications



First Room2Roam workshop, Whitehorse, June 2022

Room2Roam: Y2Y Wildlife Movements

Y2Y partners



Development partners



https://ceg.osu.edu/Y2Y_Room2Roam